

# A NEW SPONGE FROM THE NEW JERSEY CRETACEOUS.

By HERVEY W. SHIMER and SIDNEY POWERS,  
*Of the Massachusetts Institute of Technology, Boston.*

Sponges have proved to be so rare in the Cretaceous rocks of America that any contribution to the subject, however slight, would be worth while. The fossil which forms the subject of the present paper is the only sponge which has been reported from the Cretaceous of New Jersey, where it was collected by H. W. Shimer in the Mount Laurel sandstone of Atlantic Highlands. This formation is composed almost entirely of moderately coarse sand grains (silicarenite) and glauconite. The age of the beds is Mount Laurel-Navesink of the upper part of the Cretaceous.

The genus *Cæloptychium*, to which it seems best to refer this specimen, has heretofore been found only in the Upper Cretaceous of Europe. Both Dr. T. W. Stanton and Prof. Stuart Weller, who have very kindly examined the specimen, have reported that they know of no sponge in North America with which it might be even generically associated. The following species were found associated with this sponge:

## FORAMINIFERA.

*Nodosaria lævigata* d'Orbigny.

## PELECYPODA.

*Arca rostellata* Morton.

*Cardium spillmani* Conrad.

*Cardium tenuistriatum* Whitfield.

*Crassatellites subplanus* (Conrad)

*Cucullæa neglecta* Gabb.

*Cucullæa tippana* Conrad.

*Cyprimeria densata* (Conrad).

*Inoceramus confertim-annulatus* Roemer.

*Ostrea mesenterica* Morton.

*Panopea decisa* Conrad.

*Trigonia thoracica* Morton.

## GASTROPODA.

*Anchura pennata* Morton.

*Gastrochæna americana* Gabb.

*Lunatia halli* Gabb.

*Pyrifusus macfarlandi* Whitfield ?

*Trachytriton atlanticum* Whitfield.

*Turbinopsis ? elevata* Whitfield.

*Turritella vertebroides* Morton.

## CEPHALOPODA.

*Baculites ovatus* Say.

*Belemnitella americana* Morton.

## VERTEBRATA.

Fish vertebæ.

Reptilian bones.

## Genus CÆLOPTYCHIUM Goldfuss.

CÆLOPTYCHIUM? JERSEYENSE, new species.

Plate 7.

Mushroomlike, contracting from a broad and depressed upper surface into a short stalk. Edge of umbel rounded. Entire surface

covered with low radiating folds, which increase in number toward margin of umbel, where about 35 are present. Umbel subcircular, with greatest diameter 33 mm. Entire height of sponge 20 mm. No ostia are apparent.

A vertical cross section near the edge of the umbel gives indication that although the arrangement of the folds upon one side of the specimen is so poorly preserved as to be indeterminate, yet the apparent connection of the folds on the opposite side in pairs seems to indicate that there was originally present the typical sigmoid arrangement characteristic of *Cæloptychium*, as seen in *C. agaricoides*, *C. decimum*, etc.

This specimen differs from the typical species of *Cæloptychium* in the rounded instead of flattened margin of umbel and in the less elevation of the folds, though this latter feature may be due to imperfect preservation. It approaches *C. seebachi* and *C. princeps* in the depressed upper surface of umbel and in the gradual contraction of its lower surface into the stalk.<sup>1</sup>

*Occurrence.*—Cretaceous, Mount Laurel-Navesink beds at Atlantic Highlands, New Jersey.

*Holotype.*—Cat. No. 31176, U.S.N.M.

---

<sup>1</sup> Abh. k. bayer. Akad. Wiss., math.-physik, classe, vol. 12, pl. 2.